



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,299	02/04/2005	Hironobu Ichimaru	Tsuruwaka 50	6359
23474 7590 02/06/2009 FLYNN THIEL BOUTELL & TANIS, P.C. 2026 RAMBLING ROAD KALAMAZOO, MI 49008-1631				
EXAMINER				
AZZ, KETH				
ART UNIT		PAPER NUMBER		
4122				
MAIL DATE		DELIVERY MODE		
02/06/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,299

Applicant(s)

ICHIMARU, HIRONOBU

Examiner

KEITH T. AZIZ

Art Unit

4122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date 2/04/2005

DETAILED ACTION

Drawings

1. The drawings are objected to because Figures 2A-2D should be designated by a legend as such - Prior Art - since only prior art is illustrated. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because the abstract should be limited to a single paragraph. Correction is required, see MPEP § 608.01(b)

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Irie (US Patent 6,508,640), hereinafter referred to as Irie '640.

Irie '640 discloses a tire vulcanizing system and method. Irie '640 teaches a tire transporting apparatus that conveys a green tire from a waiting position to a tire supplying position, as well as the step for moving the tire from the waiting position to the supplying position. See item T1 in Figure 1, as well as the Abstract of Irie '640. Irie '640 also teaches a tire loading device that brings the tire from a waiting position to a supplying position, as well as the step where the device takes the tire from the waiting position to the supplying position. See item OPg of Figure 1 as well as lines 3-5 of column 9 in Irie '640. Irie '640 also teaches a lower mold half that reciprocates between the tire supplying position and a tire vulcanizing position, an upper mold half that descends to a vulcanizing position, and a step where the upper mold half descends and vulcanizes a tire. See lines 53-65 of column 10 as well as items OPc and M21 in Figures 2-3 of Irie '640. Irie '640 teaches that the conveying apparatus is capable of reciprocating during the period of vulcanization and molding of the green tire, and a step where the vulcanization occurs during the time that a tire is conveyed. See Figure1, the Abstract, and lines 42-50 of column 2 in Irie '640.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document JP2000-158447 in view of US Patent Application Publication 2002/0041910 (Irie '910 hereinafter). US Patent 6,554,597 (Ichimaru hereinafter) is an English language equivalent to JP2000-158447 and all citations herein are taken therefrom.

Ichimaru teaches a tire conveying apparatus that reciprocates between a waiting position and a tire supplying position, a tire elevating apparatus that elevates a tire into an ascent holding position from the supplying position, a lower mold that reciprocates between the supplying position and vulcanizing position, and an upper mold that elevates at the tire vulcanizing position See the abstract and Figures 1-5 of Ichimaru. Ichimaru further teaches a process for vulcanizing a tire utilizing is a tire conveyance supplying step, a tire ascent holding step, a tire conveyance returning step, a tire descent setting step, a supply moving step, a tire vulcanizing step, a leaving step, and a return moving step. Again, see the abstract and Figures 1-5 of Ichimaru.

Ichimaru does not teach a tire conveying apparatus that is free to move from the reciprocating lower mold. Additionally, Ichimaru does not teach a process where a tire conveyance step can occur during the tire vulcanizing step.

Irie '910 teaches a conveying apparatus that is free to move from a lower mold, as well as a process where the conveyance can occur during vulcanization. See the Abstract, as well as Figures 1-5 of Irie '910. It would have been obvious to one of ordinary skill in the art at the time of invention to make the moving unit that joined the conveying apparatus free from the reciprocating lower mold as taught by Irie '910 in the process and apparatus as taught by Ichimaru. The rationale to do so would have been the motivation to improve operation efficiency, as the time for loading and shaping a green tire is much shorter than the time over which vulcanization is performed, as shown by Irie '910(See paragraph [0004] of Irie '910).

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichimaru as applied above, in view of Steidl et al. (U.S. Patent 6,610,238), hereinafter referred to as Steidl, and further in view of Irie (U.S. Patent Application 2002/0041910), hereinafter referred to as Irie '910, and further in view of applicant's admission.

Ichimaru discloses a tire vulcanizing machine. Ichimaru teaches a tire conveying apparatus that reciprocates between a waiting position and a tire supplying position, a tire elevating apparatus that elevates a tire into an ascent holding position from the supplying position, a lower mold that reciprocates between the supplying position and vulcanizing position, and an upper mold that elevates at the tire vulcanizing position.

Additionally, Ichimaru teaches a process for vulcanizing a tire using the aforementioned apparatus, where there is a tire conveyance supplying step, a tire ascent holding step, a tire conveyance returning step, a tire descent setting step, a supply moving step, a tire vulcanizing step, a leaving step, and a return moving step. See the abstract and Figures 1-5 of Ichimaru.

Ichimaru does not teach that the tire conveying apparatus and lower mold component are separable, and does not teach a process where the tire conveyance step and vulcanizing step happen simultaneously.

Steidl teaches a tire curing system and method where the tire conveying apparatus and lower mold component are separable, and where the tire conveyance step and tire vulcanizing step can happen simultaneously. See item 91 of Figure 1 in Steidl. Steidl and Ichimaru are combinable because they are concerned with similar technical fields, namely tire curing. It would have been obvious to one of ordinary skill in the art at the time of invention to include a separable tire conveying apparatus and lower mold half in the process of Ichimaru. The rationale to do so would have been the motivation to improve operation efficiency, as the time for loading and shaping a green tire is much shorter than the time over which vulcanization is performed, as shown by Irie '910 (See paragraph [0004] of Irie '910).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

European Patent Application 0-709-179-A2 to Irie, drawn to a tire conveying apparatus that reciprocates between a waiting position and a tire supplying position.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH T. AZIZ whose telephone number is (571)270-7658. The examiner can normally be reached on Monday through Friday 8:00am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KTA/

/Timothy J. Kugel/
Primary Examiner, Art Unit 1796